The following Listing of Claims replaces all prior listings, and versions, of claims in the subject patent application.

Listing of Claims:

1-8. (canceled)

9 (currently amended): Method of forming a nozzle in a nozzle plate for an ink jet printhead, the nozzle having a nozzle inlet and a nozzle outlet in respective opposite faces of said nozzle plate, the method comprising the steps of:

directing a high energy beam having a first axis extending in a first direction towards said nozzle plate; introducing divergence into said beam; thereafter directing said beam at a single aperture of a mask, thereby to shape said beam; thereafter passing said beam through beam converging means, and subsequently directing said beam at said [[~~substrate~~]] nozzle plate such that said beam first impinges upon [[~~the~~]] a face of said nozzle plate in which said nozzle outlet is formed, thereby to form a nozzle, the nozzle outlet being conjugate through said beam converging means with said single aperture;

wherein the step of introducing divergence into said beam comprises splitting said beam into a number of sub-beams, each sub-beam having divergence, the origin of divergence of each sub-beam lying apart from the point at which the respective sub-beam is created by splitting; thereafter passing the sub-beams through further beam converging means prior to recombining and directing the sub-beams [[~~through~~]] at said single aperture of said mask, wherein dimensions of a section of said recombined beam directly prior to impinging a plane of said mask are substantially equal to dimensions of said single aperture of said mask; and,

wherein said high energy beam is directed at a first planar reflecting surface lying at an angle to said first direction, said first surface being arranged so as to reflect said beam toward [[~~at least~~]] two additional beam reflecting surfaces, said first, second and third planar reflecting surfaces being so arranged as to both invert said beam and direct said beam along an axis colinear with said first axis extending in said first direction; said first planar reflecting surface and said at least two additional beam reflecting surfaces being fixed relative to one another, thereby to form an assembly, and rotating said assembly about said first axis, said

beam thereafter impinging on said nozzle plate, thereby to form said nozzle wherein said nozzle inlet is larger in diameter than said nozzle outlet.

10-22. (canceled)

23 (currently amended): Method of forming a nozzle in a nozzle plate for an ink jet printhead, the nozzle having a nozzle inlet and a nozzle outlet in respective opposite faces of said nozzle plate, the method comprising the steps of:

directing a high energy beam having a first axis extending in a first direction towards said nozzle plate; directing said beam at a first reflecting surface lying at an angle to said first direction, said first reflecting surface being arranged so as to reflect said beam towards a second reflecting surface and a third reflecting surface so arranged as to both invert said beam and direct said beam along an axis colinear with said first axis; said first, second, and third surfaces being fixedly located relative to one another, thereby to form an assembly, and rotating said assembly about said first axis; said beam thereafter being directed at and first impinging on a face of said nozzle plate in which said nozzle outlet is formed, thereby to form said nozzle wherein said nozzle inlet is larger in diameter than said nozzle outlet.

24 (original): Method according to claim 23 wherein the reflecting surfaces each comprises a discrete member.

25 (original): Method according to claim 24, wherein said discrete member is a high reflectance dielectric mirror.

26-30. (canceled)

31 (currently amended): A system for forming a nozzle in a nozzle plate for an ink jet printhead. said system comprising a nozzle plate substrate, [[~~and~~]] an assembly, and a source of a high energy beam having a first axis extending in a first direction; wherein the assembly comprises a first reflecting surface lying at an angle to said first direction, a second reflecting surface, and a third reflecting surface, said first, second, and third reflecting surfaces being fixedly located relative to one another such that said high energy beam is reflected by said first reflecting surface towards said second reflecting surface and said third reflecting surface, thereby to both invert said beam and direct said beam along a second axis colinear with said first axis; said assembly being rotatable about said first axis, and said nozzle plate substrate being partly disposed within a path defined by said second axis and arranged such that said beam is directed at and first impinges upon a face of said nozzle plate substrate in which a nozzle outlet is formed, and wherein said nozzle outlet is smaller in size than a nozzle inlet formed in an opposite face of said nozzle plate substrate.

32-33. (canceled)

34 (previously presented): Method according to claim 9, wherein the power of said high energy beam is initially held low and is increased with increasing depth of the nozzle formed in said nozzle plate.

35 (previously presented): Method according to claim 9, wherein a further mask is interposed between the mask and the beam converging means.

36 (currently amended): Method of forming a nozzle in a nozzle plate for an ink jet printhead, the nozzle having a nozzle inlet and a nozzle outlet in respective opposite faces of said nozzle plate, the method comprising the steps of:

directing a high energy beam having a first axis extending in a first direction towards said nozzle plate; introducing divergence into said beam; thereafter directing said beam at a single aperture of a mask, thereby to shape said beam; thereafter passing said beam through beam converging means, and subsequently directing said beam at said [[~~substrate~~]] nozzle

plate such that said beam first impinges upon the face of said nozzle plate in which said nozzle outlet is formed, thereby to form a nozzle, the nozzle outlet being conjugate through said beam converging means with said single aperture;

wherein the step of introducing divergence into said beam comprises splitting said beam into a number of sub-beams, each sub-beam having divergence, the origin of divergence of each sub-beam lying apart from the point at which the respective sub-beam is created by splitting; thereafter passing the sub-beams through further beam converging means prior to recombining and directing the sub-beams [[~~through~~]] at said single aperture of said mask, wherein dimensions of a section of said recombined beam directly prior to impinging a plane of said mask are substantially equal to dimensions of said single aperture of said mask;

wherein said high energy beam is directed at a first planar reflecting surface lying at an angle to said first direction, said first surface being arranged so as to reflect said beam toward a second beam reflecting surface and a third beam reflecting surface so arranged as to both invert said beam and direct said beam along an axis [[colinear]] collinear with said first axis extending in said first direction; said first planar reflecting surface and said second and third beam reflecting surfaces being fixed relative to one another, thereby to form an assembly, and rotating said assembly about said first axis, said beam thereafter impinging on said nozzle plate, thereby to form said nozzle wherein said nozzle inlet is larger in diameter than said nozzle outlet; and[[;]]

wherein the power of said high energy beam is initially held low and is increased with increasing depth of the nozzle formed in said nozzle plate.

37(previously presented): Method according to claim 36, wherein a further mask is interposed between the mask and the beam converging means.